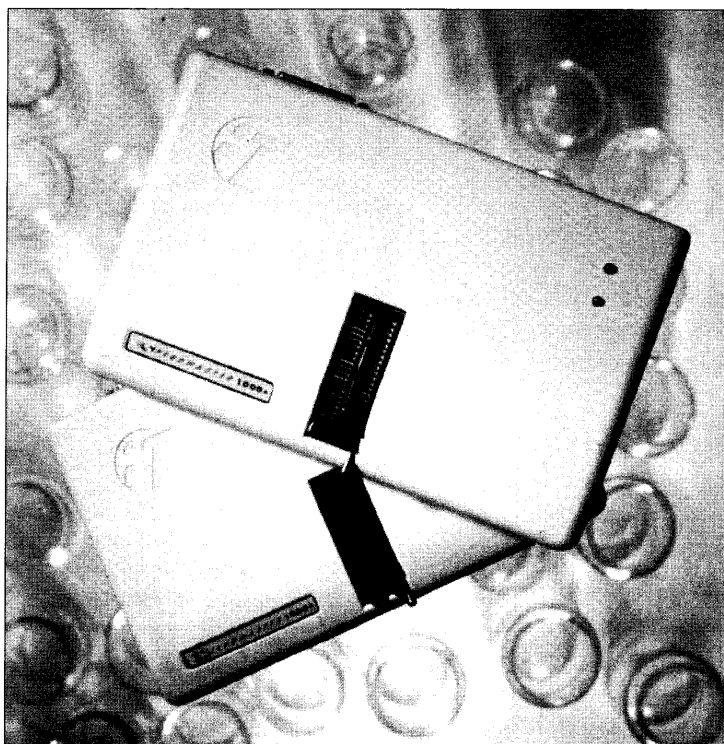# 1000+ Multi-Device/Universal Programmers

Speedmaster 1000+   ◆   **Micromaster 1000+**

Low cost solutions to meet all of your memory, microcontroller and PLD programming needs

With an affordable, easy upgrade path from the Speedmaster to the Micromaster model, as well as upto the LV models, there is no need to worry about the programmer falling behind as your designs move ahead. As with all ICE Technology programmers, all supported devices in DIL packaging up to 40-pins require NO additional modules, adapters, resisters or software

DEVICE SUPPORT

Micromaster 1000+

✓ 8 and 16 bit Memory: EPROM, Paged EPROM, parallel & serial EEPROM, Serial EPROM and Flash, up to 8Mbit
✓ Programmable Logic: PAL & GAL, PEEL, PALCE etc.
✓ Complex PLDs: AMD MACH, Altera MAX, Xilinx EPLD etc.
✓ Peripheral Devices: PSD etc.
✓ Over 180 microcontrollers: PIC, MCS-48/51/196, 8951, COP8, ST6, H8, Z86, TMS320/370, MC705/711 etc.

Speedmaster 1000+

✓ 8 and 16 bit Memory: EPROM, Paged EPROM, parallel & serial EEPROM, Serial EPROM and Flash, up to 8Mbit
✓ Programmable Logic: GAL, PEEL, PALCE etc.
✓ 8748/51 microcontrollers

See full device support list for comprehensive parts listing.

All on-chip features including Security, Serialisation, Oscillator settings, Watch-Dog Timer, RAM size, Brown-Out etc. are supported and easy to select.

BATTERY OPERATION

• Works from 8 AA batteries (standard or rechargeable)
• Long battery life - Programmer automatically powers down during periods of inactivity, & powers up only during active operations
• Built in recharging circuit
• Ideal for use with Laptop PCs
• Adapter / recharger supplied

FEATURES

◆ Universal Device Support on Micromaster model
◆ Optional built-in ROM/RAM Emulator cards from 128k by 8 up to 512k by 16
◆ Low cost upgrade path from Speedmaster to Micromaster models
◆ Free lifetime software upgrades from BBS or Internet Home page
◆ Major manufacturer approved
◆ Interfaces to PC parallel port
◆ High speed programme and verify: 27C512 in less than 11 seconds
◆ Works from batteries or from adapter/recharger provided
◆ User friendly PC software works under DOS or Windows and supports mouse operation

SPEED OF PROGRAMMING

With larger and larger devices, speed of programming is critical in cutting development and production times. ICE Technology has always prided itself in having the fastest device programmers possible.

Device	Time
27C256	5 secs
27C040	84 secs
29F040	90 secs
GAL16V8	2 secs
†PIC16C54	1 sec
All given times include total time to download, programme and verify the device	

† Micromaster model only

MORE THAN JUST A PROGRAMMER

With the 1000+ programmers, you get not only a multi-device/Universal programmer, but also a tester for TTL, CMOS, DRAM and SRAM devices - all as standard. In addition to this, ROM emulator options are also available to speed up your development times.

SOFTWARE FUNCTIONS

The 1000+ programmers are operated using our standard PC software with the unit connected to the parallel port. Easy to follow step through menus provide full functionality, with many features as standard usually only found on much higher cost programmers.

Functions include:

- File load, edit and save
- Data formats: Intel Hex, Motorola S-Record, Hex Auto-Recognition TekHex, Extended TekHex, ASCII, Raw Binary, Octal, Altera POF etc.
- Extensive Buffer editing commands
- Checksum in 3 popular formats + CRC checking
- Read, Verify, Verify Signature, Bit Test, Blank Check, Programme, Chip Erase, Identify device
- Programming Options for device serialisation, marginal verify, Auto-Programme Pre-test etc.
- Single keystroke action for continuous programming, reducing the margin of operator error
- Supports microcontroller features including Oscillator settings, Brown-Out, Watch-Dog Timer, RAM size etc.
- Full Security & Encryption array support
- JEDEC Fusemap editing capability
- Edit and apply test vectors for upto 40-pins DIL/44-pins PLCC
- Checks device position in socket before applying voltages to pins
- Environment option allows complete device configuration to be stored, minimising future setup times
- Batch software enables user macros to be written for customised software interface in DOS

BUILT IN ROM/RAM EMULATOR OPTIONS

Optional RAM/RAM Emulator cards turn the 1000+ programmer into a powerful development tool. The cards can be fitted inside either the Speedmaster or Micromaster model. Available in 8 or 16-bit formats, the emulator kit comes complete with plug-in card, ROM/RAM cable(s), software and manual. A 40-pin DIL adapter is also provided with the 16-bit option.

- Emulates ROM and RAM using the same cable (supplied as standard)
- Emulates from 128K by 8 up to 512K by 16
- Modify-on-the-Fly feature allows information to be modified while target system is active
- Communications channel allows bi-directional comms without messy strobe wires
- Built-in active low/high reset function
- Additional programmable active low/high interrupt & reset at any address
- Very fast Download times

More details on the LVEC built in emulators are available on the Emulator data sheet.

MANUFACTURER APPROVED

All device algorithms are implemented using only manufacturer approved programming specifications. ICE Technology works very closely with all of the semiconductor vendors to ensure the complete integrity and reliability of the algorithms.

The 1000+ range of programmers have been officially approved by a number of major manufacturers including AMD, Atmel and Microchip. Many other silicon vendors recommend the unit as a development tool, including Altera, Fujitsu, ICT, Intel, Motorola, National Semiconductor and Xilinx.

SOFTWARE UPDATES

FREE software updates are available from our Bulletin Board Service or Internet Web page, and can be downloaded at any time, giving you the very latest devices and software revisions at no extra charge.

PACKAGE ADAPTERS

As with all ICE Technology Programmers, any device upto 40-pins in DIL packaging is supported without the need for any adapter or module. However, a range of high quality socket adapters is available to support surface mount parts: PLCC, SOIC, TSOP, PSOP etc. See price list for full details.

GUARANTEE & SUPPORT

- Full refund if not completely satisfied within 30-days†
- Full one year warranty
- Selftest software provided for full hardware and firmware diagnostics
- FREE lifetime technical support & software upgrades

† Refund excludes carriage costs

PHYSICAL SPECIFICATIONS

- Software operates in DOS or DOS-Shell under Windows 3.1/95 on any PC compatible from 8086 upwards
- Hard-Disk requirement: 1.7MB
- Dimensions: 9.5" x 6" x 2"
- Programmer weight (without batteries): approximately 2lbs (1kg) Recharger/adapter approx. 0.5lbs.
- Shipping weight: 6lbs (3kg)

Package Includes:
• Programmer	• Menu driven PC
• Mains adapter	software
• Parallel Cable	• Fault diagnostic
• Manual	software

Options:
- ROM/RAM Emulator card
- Range of Socket change adapters
- Batteries: 8xAA (Standard or Rechargeable)
- Spare PC parallel card
- Mains adapters for other voltages (UK, USA, Euro, Japan available)

ORDERING INFORMATION

Speedmaster 1000+ Programmer :
                    SM1KP-xxx
Micro*master 1000+ Programmer :*
                    MM1KP-xxx

xxx = mains supply: UK (240V)
EUR (230V), JAP (100V), USA (115V)

For further information, availability & pricing details, contact:

ICE Technology Ltd.

tel : 01226 767404 • fax : 01226 370434
bbs : 01226 761181 (14400 baud, 8N1)